

State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
MEETING

Location:
Anchorage Marriott Hotel
820 West Seventh Avenue
Anchorage, Alaska

MINUTES OF
December 3-4, 2015

Thursday, December 3, 2015

CALL TO ORDER

CHAIR GAIL SCHUBERT called the meeting of the Alaska Retirement Management Board (ARMB) to order at 9:00 a.m.

ROLL CALL

Nine ARMB trustees were present at roll call to form a quorum.

Board Members Present

Gail Schubert, *Chair*
Sam Trivette, *Vice Chair*
Gayle Harbo, *Secretary*
Kristin Erchinger
Commissioner Sheldon Fisher
Commissioner Randall Hoffbeck
Tom Brice
Sandi Ryan
Martin Pihl

Investment Advisory Council Members Present

Dr. William Jennings

Investment Advisory Council Members Absent

Robert Shaw
Dr. Jerrold Mitchell

Department of Revenue Staff Present

Gary M. Bader, Chief Investment Officer
Scott Jones, State Comptroller
Pamela Leary, Director, Treasury Division
Judy Hall, Board Liaison

Bob Mitchell, Deputy Chief Investment Officer

Department of Administration Staff Present

Kevin Worley, Chief Financial Officer, Division of Retirement & Benefits (DRB)

John Boucher, Deputy Commissioner, Office of Management & Budget

Consultants, Invited Participants, and Others Present

Matt Egenes, Barrow Hanley Mewhinney & Strauss, LLC

Jim McClure, Barrow Hanley Mewhinney & Strauss, LLC

Steven Center, Callan Associates, Inc.

Jay Kloepfer, Callan Associates, Inc.

Gary Robertson, Callan Associates, Inc.

Stuart Goering, Department of Law, Assistant Attorney General

Tim Atwill, Eaton Vance

Daniel Ryan, Eaton Vance

Melissa Beedle, KPMG

Michael Hayhurst, KPMG

Tony Dote, Lazard Asset Management

Rob Failla, Lazard Asset Management

Steve Courtney, Quantitative Management Associates, LLC (QMA)

Michael Hackett, Victory Capital Management

Gary Miller, Victory Capital Management

PUBLIC MEETING NOTICE

JUDY HALL confirmed that public meeting notice requirements had been met.

APPROVAL OF AGENDA

MS. RYAN moved to approve the agenda. MRS. HARBO seconded the motion.

GARY M. BADER, Chief Investment Officer, requested to amend Item 9. from 1:15 to 2:00, add Item 9A. Earnings Assumption Discussion from 2:00 to 2:15, and add Item 12E. Fidelity Small Company Fund.

MR. BRICE moved to amend the agenda changing Item 9. from 1:15 to 2:00, adding Item 9A. Earnings Assumption Discussion from 2:00 to 2:15, and adding Item 12E. Fidelity Small Company Fund. MRS. HARBO seconded the motion.

The motion to amend the agenda was approved.

The agenda was approved as amended.

PUBLIC/MEMBER PARTICIPATION, COMMUNICATIONS, AND APPEARANCES

None

APPROVAL OF MINUTES: September 24-25, 2015, and November 9, 2015

MRS. HARBO moved to approve the minutes of September 24-25, 2015, and November 9, 2015 meetings. MR. BRICE seconded the motion.

The minutes were approved.

ELECTION OF OFFICERS

MR. PIHL moved for unanimous consent to reelect CHAIR SCHUBERT, VICE-CHAIR TRIVETTE, and SECRETARY HARBO. MR. BRICE seconded the motion.

The motion passed unanimously.

REPORTS

1. CHAIR REPORT

CHAIR SCHUBERT expressed her disappointment in not being able to attend the October training.

2. COMMITTEE REPORTS

A. Audit Committee

MR. PIHL reported the full Audit Committee met on December 2nd. The meeting was very well-attended. The main topic of the meeting was a report by KPMG on the conclusion of the six audits of the retirement plans administered by the Department of Administration. Staff provided full cooperation during the audits and KPMG will present on their findings to the Board today.

MR. PIHL stated the Audit Committee heard reports on the salary floor billings, employer late filings, and employer audits. MR. PIHL advised the state issued final schedules of the interpretation of GASB required reporting of the unfunded liability. Employers have the responsibility to make their own interpretations regarding special funding and calculations.

B. Legislative Committee

None

3. RETIREMENT & BENEFITS DIVISION REPORT

A. Membership Statistics (informational)

Chief Financial Officer of the Division of Retirement and Benefits KEVIN WORLEY noted the informational membership statistics were provided in the packets. The total active

members, as of September 30, 2015, for PERS DB was 17,538. The PERS DC has now exceeded that number for a total of 17,971 members. The TRS DB system has a total of 5,616 members, which exceeds the TRS DC system by about 715 members.

MRS. HARBO asked if the DC members' full disbursements included their SBS accounts. MR. WORLEY noted staff is still working on MRS. HARBO's request from the last meeting to weave that information together and show it in the report.

B. Buck Consulting Invoices (informational)

MR. WORLEY noted the Board requested a summary of monthly invoice billings from Buck Consultants. This report includes billing for the first three months of FY 16 and a comparison to billing for the first three months of FY 15. There was a significant increase in both PERS and TRS during this timeframe due to Buck's additional work with the Actuarial Committee in completing the valuation reports on an accelerated timeline.

C. TRS FY17 Contribution Rate - Corrected Resolution Resolution 2015-21

MR. WORLEY stated Resolution 2015-11 previously passed by the Board, related to the Teachers' Retirement Defined Benefit employer contribution rate, included an error referencing the PERS rate. All other sections were correct. MR. WORLEY stated Resolution 2015-21 corrects the error to reflect the TRS rate and replaces Resolution 2015-11. MR. WORLEY requested adoption of Resolution 2015-21.

MRS. HARBO moved the Board set fiscal year 2017 Teachers' Retirement System actuarially determined contribution rates attributable to employers, consistent with its fiduciary duty, as set out in the attached form of 2015-21. VICE-CHAIR TRIVETTE seconded the motion.

A roll call vote was taken, and the motion passed unanimously.

D. Legislative Session Update

JOHN BOUCHER, Deputy Commissioner, Office of Management & Budget, informed the court system requested a different approach to the Judicial Retirement System 2017 rates brought before the Board at the September meeting in a letter from the Commissioner of Administration. The proposal is for a slightly lower rate for FY 17 by paying in advance. The contributions over time would be exactly the same. Staff is working with Buck Consultants to accommodate this request. This issue will be brought before the Board once discussions are concluded.

DEPUTY COMMISSIONER BOUCHER provided the legislative session update. HB47 is an active legislation related to PERS, which would allow certain municipalities whose population has decreased more than 25% between the 2000 and 2010 census to be retroactively exempt from the 2008 salary for PERS contributions. HB47 also would lower the interest rate charged on delinquent contributions to 8% from the current 12%.

DEPUTY COMMISSIONER BOUCHER reported HB66 would provide health insurance coverage from the retirement systems for dependents of public employees who die in the line of duty. HB90 and SB83 is the hybrid approach for the police officer/firefighter defined benefit retirement bill. HB211 would make available retirement incentive programs for DB plans in both PERS and TRS. SB79 and HB172 would allow the rehiring and employment of retired teachers and administrators. SB88 would allow current Tier IV employees to be offered a DB plan option.

TRUSTEE BRICE inquired regarding the Administration's position on HB90. DEPUTY COMMISSIONER BOUCHER noted the general position of the Governor has been to consider a DB bill if it were both cost neutral and risk neutral. TRUSTEE BRICE requested an update on the RIP program, in terms of state finances. DEPUTY COMMISSIONER BOUCHER indicated his understanding was RIP bills were not favorable for the system.

MRS. HARBO commented the early retirement incentive bills in the late '80s and early '90s were detrimental to the system and increased the unfunded liability.

COMMISSIONER FISHER noted over 20% of state employees are eligible or will be eligible to retire in the next five years, and approximately 2/3 of those employees will retire without an incentive program.

MR. PIHL commented the actuary report shows the retirement system benefit payments per year will be over \$2.5 billion in not too many years in the future.

4. TREASURY DIVISION REPORT

Treasury Division Director PAMELA LEARY reported the Governor's budget is forthcoming in the next couple of weeks and she will provide more information as it is revealed. MS. LEARY reported she and State Comptroller SCOTT JONES visited with State Street last month as part of the due diligence and discussions regarding ongoing issues. MS. LEARY requested the existing contract with State Street be amended for one to three years. The accounting system is new and it is important to ensure the interfaces continue to work well. Staff is also working with State Street on additional services, including securities lending and risk products. Possible cost efficiencies could result because of the continued relationship with State Street. MS. LEARY advised the Board will not have an action item regarding the amendment. She will seek approval from the Board and COMMISSIONER HOFFBECK and will report back during the process.

5. CIO REPORT

MR. BADER reviewed the CIO Report included in the Board's packet. The MacKay Shield's allocation was reduced by \$190 million, which funded two other high yield Board approved mandates. The Brandes allocation was reduced by \$300 million, of which \$100 million increased funding went to each Alliance, Baillie Gifford, and Arrowstreet. This occurred to

bring the international investments more into balance with one another. Approximately \$31 million from two transactions was transferred to Blue Glacier funds.

MR. BADER believes the line item reflecting a \$25,000 transfer from cash to Fidelity Real Estate High Income Fund should be \$25 million. He will verify the accuracy at the next meeting. The retirement fund has been rebalanced several times. The rebalancing included in the packet is from November 19th.

MR. BADER reported the proposal for a review of the defined contribution plans by Callan will be brought before the Board at the February meeting. Discussions with Department of Administration will occur regarding the Callan review and other items. MR. BADER informed the net of fee template requested by COMMISSIONER FISHER continues to be developed by Callan and is expected to be included at the February meeting.

MR. BADER noted the earnings assumption discussion added to the agenda relates to the change in earnings assumption by the California Public Employees Retirement System (CalPERS) and adoption of a strategy for lowering the earnings assumption over time. MR. BADER indicated Governor Brown of California criticized the change and wanted a more aggressive timeline. MR. BADER stated the later agenda item discussion will review the ARMB's reasonable earnings assumption and the evidence supporting the assumption.

6. FUND FINANCIAL REPORT with CASH FLOW UPDATE

State Comptroller SCOTT JONES and MR. WORLEY presented the Fund Financial Report. MR. JONES reviewed the financial statements for the year-to-date ending September 2015. The approximate numbers are: the PERS system ended with \$15.4 billion, the TRS system with \$7.6 billion, the JRS with \$160 million, the National Guard and Naval Militia (NGNMRS) with \$34.8 million, SBS with \$3.2 billion, and Deferred Comp with \$767 million, for a total of \$27.7 billion, of which \$22.4 billion is non-participant directed assets and \$4.8 billion is participant-directed assets. This is a year-to-date change of -6.4% and roughly -5.44% was due to investment income. The asset allocation was within bands at the end of September.

MR. JONES reviewed the updated financial statements as of the end of November. The approximate numbers are: the PERS system ended with \$16 billion, the TRS system with \$7.9 billion, the JRS with \$171 million, the NGNMRS with \$36 million, SBS with \$3.4 billion, and Deferred Comp with \$806 million. The year-to-date change is a total of -2.4% and roughly -1.67% was due to investment income.

MR. WORLEY informed the three-month report for the Division of Retirement and Benefits PERS Healthcare Trust received \$6.4 million in pharmacy and prescription rebates and TRS Healthcare Trust received approximately \$2.1 million in pharmacy and prescription rebates.

MR. PIHL commented the state assistance contribution normally occurs in July, and asked for an update on the schedule this year. MR. WORLEY explained the state has gone through an accounting system conversion which began July 1. The Division of Finance requested the

state assistance contribution transaction be initiated on September 30th due to the new accounting system transition. MR. WORLEY indicated the transaction will be shown on the next report.

VICE-CHAIR TRIVETTE expressed his appreciation to MR. WORLEY for fulfilling his request to provide highlights and notes for the DRB Supplement to the Treasury Report.

CHAIR SCHUBERT noted the meeting was ahead of schedule and requested to address Unfinished Business while waiting for the next presenters. There was no objection.

UNFINISHED BUSINESS

1. Calendar

JUDY HALL, Board Liaison, stated the 2016 calendar of meetings was included in the Board's packet and no additions have been made.

VICE-CHAIR TRIVETTE requested the DC Committee meeting in February be added to the calendar.

2. Disclosure Report

MS. HALL indicated the Disclosure Report was included in the Board's packet. There is nothing unusual to report.

3. Legal Report

STUART GOERING, Department of Law, Assistant Attorney General, reported the action against Petrobras has been filed on behalf of the Board and the Permanent Fund Corporation. The case has been assigned to Judge Rakoff in the United States District Court for the Southern District of New York. The case has a very aggressive schedule, with discovery underway and the trial set for September. MR. GOERING commented the course of discovery and the initial disclosures supports the assessment of outside counsel that the primary objective at this point of Petrobras is to obtain early settlements with larger institutional investors. He believes this is positive for the Board.

MR. GOERING advised this matter raises broader policy issues for Board action sometime next year. The current class litigation policy is an obsolete ASPIB era policy, which needs to be reconsidered and updated. A policy on foreign opt-in class litigation needs to be created. MR. GOERING informed the Board previously adopted a resolution and memorandum of understanding (MOU) with the Department of Law relating to class litigation. As far as he can tell, these were never executed by the Department of Law. MR. GOERING stated the MOU will be updated and brought back for Board approval. The experience over the next couple of months with the current litigation will help shape the policy development.

MR. PIHL asked if there are hundreds of class litigations over the scope of investments and if the managers are responsible for filing on the Board's behalf. MR. GOERING noted he does not know the number of class litigations. On U.S. domestic investments, no filing for class litigation is necessary because it is an automatic inclusion. On foreign investments, the Board is notified by the custodial managers regarding class actions and are given an opportunity to opt in.

7. PRIVATE EQUITY REVIEW

GARY ROBERTSON, Senior Vice-President, Callan Associates, Inc., provided a detailed presentation on the Private Equity Portfolio Review and Performance Analysis. He reported this has been another very good year in the private equity market and the third year in a row where the private equity market has been very liquid and distributions very strong. The since-inception returns are competitive against the databases. Callan is urging clients to be mindful of the denominator effect going forward. The denominator effect happens when the public securities decline and the private equity portfolio does not decline as much. The effect can be much higher funding very quickly. The private equity portfolio allocation is currently 7.6%. The target allocation is 9%.

MR. ROBERTSON discussed a timeline chart showing industry commitments to private equity funds in each vintage year and compared the investment year and timing of each manager. The backlog of uncalled commitments has been moved up to almost 70% of the NAV. The portfolio is well funded to achieve the long-term goals.

MR. ROBERTSON indicated fundraising is strong this year for the private equity market and prices are high. Debt is easy to get, but the leveraged amount has been regulated to six times EBITDA. The SEC has an interesting influence on the industry right now. They established their presence in 2014, and began enforcements in 2015. As a result, limited partners are interested in transparency of fees, carried interest, and expenses. This trend will be monitored.

MR. ROBERTSON noted the message to clients is to be very cautious. The hope is liquidity will continue. If the equity valuations move up and down, the M&A activity slows down. Private equity is performing at expectations and public markets are a little above expectations. The spreads between the two are narrowing.

MR. ROBERTSON reviewed the private equity performance for 2015 and compared it to the performance of 2014. The commitments increased by \$641 million or 16%. Paid-in capital increased \$401 million or 13%. Uncalled capital increased \$271 million or 27%. The portfolio is 75% paid-in. This was a historic year for distributions at \$515 million of gross cash flow. The net cash flow was \$114 million, which is a yield of approximately 7%. The remainder was reinvested into the portfolio. The IRR was at 11.1%. The total unrealized portfolio appreciation totaled 13%. This is the net cash flow plus the NAV increase minus the amount reinvested. MR. ROBERTSON noted the portfolio's benchmark comparisons. The 11.1% IRR is in the second quartile. The TVPI is in the middle of the second quartile.

MR. BADER requested examples of investment characteristics of portfolios that achieve top quartile results. MR. ROBERTSON explained he has never seen a portfolio within the top quartile distribution because the top quartile strips out the very best partnerships and no one picks all first quartile partnerships every year.

MR. ROBERTSON continued his presentation with a historical assessment of the portfolio's development of relative strength over time. The net cash flow plus the NAV increase equals the total portfolio appreciation, which averaged a 12% return over the nine-year period. The portfolio diversification is very broad and nicely balanced. The managers are complementary. MR. ROBERTSON provided a detailed review of the managers' profiles.

MR. PIHL asked why the vintage year peer group benchmark slides only show up to year 2012. MR. ROBERTSON explained the investments made in the last two years are included in the cumulative numbers, but not included in the year-over-year bar graph because the industry convention is funds that are less than four years old are too undeveloped to uniquely benchmark and managers usually do not provide numbers for those.

MR. ROBERTSON reviewed the in-house portfolio. It is comprised of 13 partnerships, \$545 million, 48% paid-in, and currently is 12% of the private equity portfolio's NAV. The portfolio was very dynamic this year because of the recent large increases in commitments. Committed capital increased 95%. Paid-in capital increased 61%. Uncalled capital increased 158%. The gross cash flow was 26% of the starting NAV. The total appreciation was 14%, which is very similar to the total portfolio. It is still very early for benchmarking and the in-house portfolio is less than half paid-in.

MR. BADER noted the in-house portfolio's IRR is 11.2%, which is between Abbott and Pathway for 2015. He asked if it is fair to believe these numbers support a request to ramp up the internal managed program. MR. ROBERTSON agreed the in-house portfolio is doing well and staff is running a good program. He cautioned against comparing the in-house portfolio to Abbott and Pathway's very long and mature portfolios.

COMMISSIONER FISHER requested the next presentation include a peer group by strategy chart comparable for the in-house portfolio. MR. ROBERTSON agreed and said it is best to remain consistent with the convention that anything less than four years is too early to benchmark and will remain judicious about showing information that could change radically. He noted the vintage years by partnership are 10, eight, and seven.

CHAIR SCHUBERT recessed the meeting from 10:27 a.m. to 10:40 a.m.

8. KPMG - Audit Report

MELISSA BEEDLE AND MICHAEL HAYHURST of KPMG gave an overview presentation of the State of Alaska Division of Retirement and Benefits Audit Results of June 30, 2015. MR. HAYHURST reported there was detailed discussion at the Audit Committee yesterday regarding the audit, the procedures performed, and the conclusions reached. KPMG has issued unmodified and clean opinions on the financial statements for the invested assets of

the retirement systems and the invested assets under the investment authority of the Commissioner of Revenue.

MR. HAYHURST stated KPMG is expected, in the near-term, to issue unmodified opinions on the financial statements for the PERS, TRS, JRS, NGNMRS, SBS, and DC plans. After which, KPMG is expected to issue an unmodified opinion on the 2015 Schedules of Employer and Nonemployer Allocations and Schedules of Pension Amounts for PERS and TRS. There were no corrected misstatements identified that are being recorded within the system financial statements. The one uncorrected item relates to the non-generally accepted accounting principles (non-GAAP) policy Revenue has for the alternative investments and the one-month lag. This is consistent with prior years and is not material to the financial statements.

MR. HAYHURST informed there will likely be a significant deficiency, not a material deficiency, related to the process Department of Administration has for gathering and validating census information for the Militia Reserve System. Work is ongoing to determine the root cause of this deficiency. MR. HAYHURST commented KPMG has a consistent core audit team and utilizes specialists in areas such as financial risk management, tax review, and marketable securities pricing.

MR. HAYHURST discussed working on the third year of census testing for PERS and TRS. Nineteen employers, with 565 total employees were selected for PERS testing. Sixteen employers, with a total of 400 employees were selected for TRS testing. MR. HAYHURST reviewed the results and noted the issues did not have a material impact to the assessment of a clean opinion.

MR. HAYHURST advised the systems will have to adopt the new other postemployment benefits (OPEB) accounting standards for next year. The employers will have to adopt the OPEB accounting standards in two years. OPEB schedules will be prepared accordingly. MR. HAYHURST provided an overview of the responsibilities listed in the appendix. It is the responsibility of management to prepare the financial statements in accordance with GAAP and having controls in place to do that. This is completed under the direction of the Audit Committee and the ARM Board. KPMG is responsible to plan and perform the audit and issue opinions on the financial statements. KPMG also reviews the information in comprehensive annual financial reports (CAFR) for the PERS and TRS to ensure the information is consistent with the audited financials and other provided information.

MR. PIHL noted MR. HAYHURST is transitioning from Alaska to Boise. MR. PIHL expressed his appreciation to MR. HAYHURST for his work over the years and his ability to clearly articulate that work to the Audit Committee.

9. PERFORMANCE MEASUREMENT - 3rd Quarter

MR. BADER introduced STEVEN CENTER and JAY KLOEPFER of Callan Associates, Inc., and informed the Board MR. ERLENDSON had a scheduling conflict for the meeting. MR. CENTER noted MR. KLOEPFER is an Executive Vice-President and has been at Callan for 17 years. He leads the Capital Markets team. MR. CENTER provided a detailed report

on the third quarter performance measurement, through September 30th, 2015, and also provided an update on the positive months of October and November. The U.S. economy has been performing well and the revised GDP number came in at 2.1% for the third quarter. Headline inflation remained unchanged. Core inflation rose just under 2%. Payroll growth continued during the quarter. Oil prices continued to drop with West Texas Intermediate falling a full 51% from September 30, 2014 to September 30, 2015.

MR. CENTER reported the only positive asset class for the last quarter was the Barclays Aggregate Index at 1.2%. The equities side entered negative territory during the quarter. The S&P 500 returned -6.4%, S&P 400 Mid Cap returned -8.5%, Russell 2000 Small Cap returned -11.9%, and MSCI Emerging Markets returned -17.8%. MR. CENTER indicated the year-to-date return for MSCI Emerging markets is -13%, and all of the other benchmarks year-to-date returns are now in positive territory. The only sector that performed well in the Russell 3000 for Q3 was utilities returning 4.2%. The laggards were materials returning -17.3% and energy returning -19%. MR. CENTER noted growth strategies outperformed value strategies during the year, and the small cap space was the worst performer.

MR. CENTER believes the market is pricing an 80% chance the Fed will act and raise rates at their December meeting. VICE-CHAIR TRIVETTE asked what percent increase the Fed is expected to move in December. MR. KLOEPFER explained there is no consensus on how much rates will increase in the near-term. The market is pricing and the consensus is for rates to be at 3.75% for the 10-year Treasury. MR. KLOEPFER stated there is irrationality in the market now regarding short-term rates. MR. CENTER added another impact that cannot be predicted is the statement Janet Yellen will give about the future path of interest rates.

MR. CENTER discussed activity by the Chinese government, including devaluing the yuan, was not anticipated by the market and led to a continued drop in energy prices and a rapid increase in volatility of the equity market. During this time, the VIX, which measures U.S. equity market volatility, spiked to its highest level since 2012. The Chinese equity market has fallen by almost 40% since the beginning of the calendar year. International equity had negative performance. This was driven by a combination of continued dollar strength and weakness in the emerging market space.

Fixed income rates remain very low and pulled down during Q3. The dip in rates on the long end of the curve is driven by investor sentiment. Real estate was a bright spot for the quarter, with both institutional direct real estate and the REIT space performing fairly well. The NCRIF Property Index rose over 3% and the REIT benchmark rose about 2% for the quarter.

MR. CENTER reviewed the actual allocation for PERS versus the target asset allocation and all are very close to targets. Compared to the Callan Public Fund Database, which shows allocations of peer public funds, PERS has a lower than average allocation to fixed income and a higher than average allocation to real assets and alternatives. The PERS near-term performance versus the peer group is not above median. This is driven by a lower fixed income allocation versus the peer group. PERS near-term performance is in line with the target benchmark.

MR. CENTER explained the attribution analysis for Q3 and the recent 12 months. Manager effect had a very slight negative impact over the quarter, and over the year, both the manager and asset allocation effects have remained fairly low. There was a dip during the quarter in long-term performance versus the actuarial return. Performance versus the asset allocation policy return remains in line. For the three-year performance, both PERS and TRS are ahead of the target benchmark and are right below the top quartile of the peer group. Over the last 10 years, PERS and TRS are both ahead of the benchmark and just below the median. Over the full 24 years, performance remains ahead of the target index and just below the bottom quartile line, again driven by the fixed income rally over the longer-term.

MR. CENTER indicated Callan is still in the process of auditing and confirming the fee system to accurately measure the net-of-fee return for each manager as requested during the previous meeting. As of September 30, PERS and TRS were both down approximately 2.4%. Through the end of November, it is expected the year-to-date numbers have improved to basically flat to slightly positive due to improvements seen in the equity space.

Total domestic equity for the quarter returned -7.3% versus the Russell 3000 at also -7.3%. Over the last 10 years, total domestic equity returned 6.6% versus the Russell 3000 at 6.9% and the S&P 500 at 6.8%. MR. CENTER believes there is a good mix of approximately 1/3 active and 2/3 passive management in the domestic equity space, along with the alternative equity allocation, including the defensive equity-oriented portfolio and the in-house equity yield portfolio. Alternative equity continued to minimize volatility on the equity side, coming in as the strongest performer across all equity allocations during the quarter at a -4.2% performance.

The international equity performance during the quarter was approximately -12%. This is in line with the MSCI ACWI ex-US benchmark. The returns compare favorably to the index over 3-year and 5-year periods. Most of the international equity managers performed in line with the index during the quarter. Mondrian, within the international small cap space, had some difficulty over the last three years of this momentum-driven market. MR. CENTER indicated there are no concerns regarding Mondrian's performance and believes Mondrian will perform well when prices come back down and valuations drive performance. The emerging markets pool has struggled over the last year and has lagged over longer-term periods. One of the emerging markets managers, Eaton Vance, will be presenting to the Board during tomorrow's meeting.

MR. CENTER reminded the Board the PERS total bond market performance is compared to Callan's fixed income database group, which includes the fixed income allocation of all public funds. The PERS fixed income allocation is comprised of an intermediate duration, high quality strategy, and is expected to lag the benchmark in periods when treasuries performed well, rates declined, and the duration bias shortened, such as the last quarter. Over longer-term periods, the bond portfolio has performed well versus the target, not the peer group.

MR. CENTER discussed the preliminary returns for real assets through September 30. There are no areas of concern. The biggest negative numbers during the quarter were on the MLP

side, which is expected due to the recent energy prices. All of the MLP managers have outperformed the MLP benchmark. There was also difficulty on the infrastructure side. The Global Infrastructure Index was -7% during the quarter. This was impacted by the currency effect and concerns about commodity prices. The absolute return performance was -3.09% last quarter compared to the HFRI Fund of Funds benchmark at -3.55%. Other than last year, the absolute return performance has exceeded its benchmark over all trailing time periods. MR. CENTER informed updated reports will be issued when the finalized numbers for all the asset return strategies become available.

MR. CENTER presented the performance of the Defined Contribution's individual account options. The Life-Cycle Funds have all been in line with benchmarks. There are no concerns with the International Equity Fund. The Stable Value Fund remains a very strong investment option. The Interest Income Fund has performed in line with expectations. The Allianz Socially Responsible Fund performed slightly better than its benchmark, which is a welcome change to their previous difficulties. All of the passive options have performed in line with their benchmarks.

A. Earnings Assumption Discussion

MR. KLOEPFER stated Callan has not had any conversations with CalPERS. The impressions expressed are from third-party information and the one-page release by CalPERS. There has been much pressure within California to lower their discount rate. Their goal is to lower the discount rate to 6.5% over the next 20 years. The mechanism to accomplish this is in any year their return is at least 4% above the discount rate, they will ratchet down their discount rate between five and 25 basis points. This will become the new discount rate. If the annual return does not produce at least 4% above the discount rate, the discount rate will not be lowered. MR. KLOEPFER explained another stated goal by CalPERS is to lower the volatility of the funded status to 8%. He believes the current volatility is between 12% and 14%, but is not certain of this accuracy.

MR. BADER asked if it is fair to say if CalPERS has good investment returns, they will lower their earnings assumption and ask more from their employers, and if the investment returns are bad, the employers will not be asked to contribute more. MR. KLOEPFER agreed to the MR. BADER's summary.

MR. BRICE asked if the target of 4% above the discount rate is too high to be reached. MR. KLOEPFER believes the 4% target is not too high and has been achieved over the last five years. He explained the mathematics show it is probable the target of 4% over the discount rate will be reached one out of every three years.

MS. ERCHINGER commented it seems like backward logic to lower their volatility and mitigate against the down years as opposed to not being able to achieve their current return targets. MR. KLOEPFER believes the logic is, without having spoken to CalPERS, that the immutable formula is comprised of contributions plus investment earnings will equal benefit payments. CalPERS is ratcheting down their discount rate to what they believe is a reasonable expectation going forward and letting the contribution side absorb the shortfall.

MR. KLOEPFER noted ARMB's discount rate is 8%, and he believes this is a decent return assumption.

COMMISSIONER FISHER asked to what extent MR. KLOEPFER interprets CalPERS' action as driven by a change in the equity markets with expected lower returns in the future versus a desire to lower CalPERS' risk and thus their return. MR. KLOEPFER believes CalPERS' stated goal is to lower risk, thus expecting a lower return. MR. KLOEPFER noted there is also political pressure in California to lower the discount rate.

COMMISSIONER FISHER asked if the political pressure is being driven by a perception the equity markets have changed. MR. KLOEPFER responded there is an overwhelming chorus of commentators who believe forward-looking expectations are going to be lower than the last 50 years. He stated public funds have achieved an 8% to 8.5% return from the capital markets over the last 50 years. MR. KLOEPFER cautioned against arguing about forecasts.

MR. PIHL asked if CalPERS and California are comparable to Alaska in providing state assistance to reduce unfunded liability. MR. KLOEPFER informed California employers and employees contribute to the system, and the state does not contribute additional funding.

MR. KLOEPFER explained a chart illustrating the fund's real return of 5.4%, net of inflation, on a rolling three-year basis back to 1991. The assumed number embedded in the fund's discount rate is 4.88%. This has been achieved. Inflation has averaged 3.7% over the long-term. The fund's inflation assumption is 3.12%. MR. KLOEPFER believes the fund's discount rate and inflation assumption are reasonable.

MR. BADER informed KPMG gave their opinion at the Audit Committee meeting yesterday affirming the earnings assumption is within an acceptable range.

MS. ERCHINGER expressed appreciation for the chart illustrating real returns. She believes it is important to see how the inflation assumption contributes to meeting the investment target.

MR. CENTER invited the Board to Callan's National Conference January 25-27, 2016.

CHAIR SCHUBERT recessed the meeting from 11:40 a.m. to 1:17 p.m.

10. VICTORY CAPITAL MANAGEMENT

VICE-CHAIR TRIVETTE welcomed GARY MILLER, CIO, Lead Portfolio Manager, and MIKE HACKETT, Director Institutional Markets, from Victory Capital Management. MR. HACKETT provided an organizational update and noted Victory Capital Management manages approximately \$35 billion in assets. Sycamore Capital is one of the nine independent investment franchise models Victory Capital rolled out last year. Sycamore Capital manages approximately \$6 billion in assets. The ARMB participates in the small cap value strategy. The small cap value strategy has total managed assets at \$2.9 billion.

MR. MILLER expressed his appreciation to the Board for continued trust in Sycamore Capital's asset management. He explained his team chose the name Sycamore Capital for the investment franchise because it reflects their investment style of long-term steady growth and strength, having the ability to flex in periods of turmoil and storms, and performing well in different environments. The Sycamore tree is also indigenous to the Midwest and Victory Capital is headquartered in Ohio.

MR. MILLER stated the fund's inception date is May of 2012. The ARMB's portfolio was approximately \$90.5 million for the quarter ending September 30th, with a return of -6.01%, compared to the Russell 2000 Value benchmark at -10.73%. The portfolio returned -2.75% year-to-date, compared to the benchmark at -10.06%. He reported performance has been on a steady upswing recently and the portfolio increased to \$99.4 million as of November 30th, which brings the year-to-date up to 5.9% versus the benchmark at -2.3%. MR. MILLER stated the portfolio gained a solid 8% in 2014, versus the benchmark of about 4.2%.

MR. MILLER explained relative performance of the strategy is clearly delineated during times when excess liquidity is being pumped into the market. Domestic sectors have been the leaders since the beginning of 2014, with the best industries being health care, staples, financial, and utilities. Stock selection has been solid the entire period. MR. MILLER stated Sycamore Capital's expertise is picking stocks and utilizes a bottom-up, fundamentally driven, intrinsic value investing method. MR. MILLER reviewed the M&A activity has been helpful in the portfolio and is a byproduct of the investment approach of buying companies with high quality, strong balance sheets that are mispriced.

MR. MILLER indicated the global cyclical sectors were weak across the board during 2014 and 2015, and commodities was especially weak during this same time period. Energy has been a very difficult space, declining 38% in 2014, followed by another 38% decline in 2015. MR. MILLER noted the portfolio's energy holdings underperformed the benchmark, returning -45%. The services holdings were affected dramatically and the underperformance was unique and surprising. Despite the excess return in the overall portfolio, MR. MILLER discussed how sector allocation has been a headwind in both 2014 and 2015, specifically the underweight in financials and the overweight in industrials and materials.

MR. MILLER reported an uptick in turnover in the portfolio during the year. This is due to opportunities outside the portfolio with longer-term time horizons and using liquidity to unwind some of the really strong performing stocks. The portfolio is beginning to show a more cyclical bias and less of a recurring revenue bias.

VICE-CHAIR TRIVETTE asked what opportunities are expected to be available in the next two or three years in the energy sector. MR. MILLER believes the market is self-correcting. The service costs have decreased dramatically, which brought down the breakevens. When credit rationalizes, the highly levered energy companies will have to start selling assets. The energy companies who are cash flow positive and perform regulatory services can benefit in different market environments.

MR. BRICE requested additional explanation regarding the portfolio stock selection process. MR. MILLER gave an overview of the investment process the team uses to identify U.S. based stocks with better business, a margin of safety, and a positive driver for the outlook of the business. This screening process includes reviewing classic valuation metrics, such as P/E, price-to-book, EBITDA, and price-to-sales. The team looks for relative underperformance or companies that have cyclically depressed margins compared to their history and compared to their peer groups.

11. EATON VANCE - Emerging Market

CHAIR SCHUBERT introduced DAN RYAN, Managing Director Client Relationship Management, and TIM ATWILL, Head of Investment Strategy, of Eaton Vance, Parametric, who provided an update on the Parametric Emerging Market Equity. MR. RYAN expressed his appreciation to the Board for the long-standing relationship of eight years in the emerging market strategy. Parametric is a subsidiary of Eaton Vance, with approximately \$150 billion in total assets under management. Portfolios include traditional passive, specialty beta type, systematic alpha, and overlay strategies. The common philosophical foundation is to add value using a disciplined, transparent process by focusing on portfolio construction and efficient implementation, while taking advantage of inefficiencies of particular asset classes.

MR. RYAN explained the emerging market strategy uses a top-down process and takes advantage of the structure inefficiencies in the emerging markets to add value. The ARMB portfolio is approximately \$225 million. Performance has been challenged over the past year. The strategy has performed as expected, given the nature of the emerging markets during the time period.

MR. ATWILL gave an overview of the philosophical underpinnings of the strategy and described techniques used in portfolio construction, which are based on the underlying premise the market cap benchmark is too concentrated. Political risk is rampant in the emerging markets asset class and transaction costs are high. It is difficult to get an information edge and it is unknown which countries are going to experience strong rallies. MR. ATWILL described value can be added by building an equal-weighted, diversified portfolio that tries to avoid transactions and keeps the diversification intact through a dynamic rebalancing mechanism. MR. ATWILL explained the tiered process used to achieve the diversification goals and to get closer to an equal weighting through systematic rebalancing.

MR. ATWILL discussed the steep reversal pathways in emerging markets where the relative winners in one year become the losers the following calendar year and the reverse dynamic is equally true. Rebalancing to the target weight is utilized to get less exposure to a potential downfall and to gain exposure to the potential winners. The primary risk factor in emerging markets is countries. The portfolio has underperformed year-to-date due primarily to the large underweight to China and the exposure to the non-index frontier market countries. MR. ATWILL believes the portfolio rebalancing is set for a very good rebound. The cycle of a country outperforming and then falling back tends to take about 18 to 24 months. MR. ATWILL indicated the team continues to work on improvements to the strategy on both the

sector diversification process and the rebalancing techniques. These evolutions will add a moderate amount of alpha and risk reduction potential to the strategy.

DR. JENNINGS asked how much return should be expected from the rebalancing process compared to the benchmark. MR. ATWILL described the historical alpha is comprised of approximately 3/4 diversification and 1/4 rebalancing, but this varies quite a bit depending upon the time period. MR. ATWILL believes the risk versus the benchmark is mostly focused in the large underweight to the larger constituents. The last cycle underperformed the benchmark by about 250 basis points. MR. ATWILL believes the current positioning is at a potential risk of a similar one-year underperformance.

MR. BRICE noted the portfolio is beating benchmark returns during the three and five-year time period, but not the one-year. He asked what needs to occur in the global economy to get positive in this strategy. MR. ATWILL believes the fear about the Fed interest rate increases is a factor for emerging markets and the impact will not be known until movement occurs. The strength of the dollar has been a headwind and the fear around the China growth story has had an effect on emerging markets.

MR. PIHL commented the strategy lost 51% in 2008 and has not fully recouped those losses. He asked for the reasons to stay in the strategy and what would need to happen to benefit the strategy. MR. ATWILL noted the U.S. markets are more richly valued than the emerging markets and buying at lower multiples over time provides a higher probability of investment success. MR. ATWILL believes there is still a growth potential in emerging markets, but sentiment is very negative and people will have to realize the potential again before it turns around. MR. ATWILL commented, in general, it is a bad investment thesis to invest in things that have gone up and get out of things that have done poorly.

12. INVESTMENT ACTIONS

A. Information: Manager Review

MR. BADER described the manager review process and the questionnaire he created with MS. HALL. Every manager was sent a questionnaire and returned it. MS. HALL compiled a report. The report was provided to each member of the IAC, MR. ERLENDSON and MR. CENTER, and was discussed at a meeting held in Denver on October 5th. Dr. Mitchell participated by phone because of the floods in North Carolina.

MR. BADER noted the first topic discussed was regarding managers with below benchmark performance. DePrince, Race & Zollo is a microcap mandate who has struggled for quite some time. They provided supplemental materials to their presentation in the questionnaire as to why they believe they will improve. The fiscal year-to-date number is -2.91%. This is beating the index of -3.71%. The manager Luther King was discussed because of their struggles and continue to trail their benchmark. Luther King has added reach to their portfolio. Neither manager has had significant staff turnover. The group feels these two managers have skill and the consensus was to continue to monitor DePrince, Race & Zollo, and Luther King.

MR. BADER reported there was not much comment on the real assets managers and there were no concerns. The manager with changes in the firm worth noting was McKinley Capital, having a significant decrease in assets over the years, which impacts the ability to keep payroll. Growth managers were out of favor for a long period of time and McKinley struggled. They have since turned around and McKinley came off of the watch list at the last meeting.

MR. BADER noted the distribution of the corporate governance mandate with Blum is complete, after several years. The last investments with Relational Investors will be distributed soon. MR. BADER noted staff is expected to respond at the February meeting regarding portfolio structure relating to options, puts, calls, buy-write, and buy-sell programs.

MR. BADER informed he visited Guggenheim and held discussions with the chief counsel and chief compliance officer regarding the signed consent decree. MR. BADER believes sufficient controls have been put in place and Guggenheim is very sensitive to the events that led up to their censure by the SEC and the \$20 million fine. MR. BADER is content the municipal bond investment with Guggenheim is among the best in class.

MR. BADER stated discussion occurred regarding additional leverage on the portfolio. The group determined the portfolio will not use leverage beyond what is involved with the current real estate comingled funds. There was no final position on the use of a brokerage window in the defined contribution plans. MR. ERLENDSON was not favorably inclined to brokerage windows and will provide a brokerage window study completed by Callan.

DR. JENNINGS commented the discussions at the IAC meeting were useful to flesh out low level issues and concerns. He believes it is good to hear the independent views of the members and to discuss those with staff.

B. Securities Lending Policy

Action: Securities Lending Policy Resolution 2015-22

MR. MITCHELL informed the Board authorized staff, at the meeting in September, to restart the Securities Lending Program and to develop a securities lending policy. Resolution 2015-22 outlines the recommendations for the Securities Lending Policy, addressing the objective of the program, the structure, reporting requirements, and the delegation of authority to staff.

MRS. HARBO moved to adopt Resolution 2015-22. MR. PIHL seconded the motion.

VICE-CHAIR TRIVETTE asked if the specific procedures and lending thresholds will be put in writing and included in the policy at a later date. MR. MITCHELL agreed and informed State Street will be the lending agent and internal staff will be investing the cash collateral from the Securities Lending Program, to the degree possible. Staff will be in discussions with State Street regarding the processes for concentration risks.

A roll call vote was taken, and the motion passed unanimously.

C. Securities Collateral Investment Guidelines

Action: Securities Collateral Investment Guidelines Resolution 2015-23

MR. MITCHELL informed Resolution 2015-23 contains a draft set of investment guidelines for the cash collateral pool that would be created to hold the cash collateral for the Securities Lending Program. The guidelines emphasize a preservation of principal and liquidity. The guidelines mirror the current guidelines for the cash pool of the short-term fixed income pool component.

VICE-CHAIR TRIVETTE moved to adopt Resolution 2015-23. MS. RYAN seconded the motion.

MS. ERCHINGER commented the performance objectives state there are no specific goals with respect to the nominal amount of income generated by the Securities Lending Program. MS. ERCHINGER asked how the success of the guidelines will be measured by staff. MR. MITCHELL explained the utilization of the portfolio cannot be predicted because the volume of securities lending is a function of the markets and lending conditions. The intent is the program will lend out a smaller portion of the portfolio than the previous securities lending program.

VICE-CHAIR TRIVETTE asked if staff believes additional monies can be generated beyond the cost of staff time to implement the program. MR. MITCHELL agreed.

A roll call vote was taken, and the motion passed unanimously.

D. Insurance Linked Securities

MR. BADER explained insurance linked securities are related to weather events and catastrophes, and are not correlated to the financial markets. It is important to have assets in the portfolio that are not correlated to other assets in order to reduce volatility. The insurance linked securities product presented by Schroders at the educational conference in New York is in development. Staff is requesting authority from the Board to work with Callan to perform due diligence on Schroders investment linked securities investment capabilities and products, and assuming a favorable review, authorize staff to enter into contract negotiations with Schroders to invest up to \$75 million.

MRS. HARBO moved to authorize staff to work with Callan to perform due diligence on Schroders investment linked securities investment capabilities and products, and assuming a favorable review, authorize staff to enter into contract negotiations with Schroders to invest up to \$75 million. MR. PIHL seconded the motion.

COMMISSIONER FISHER commented the presentation was quite interesting. He asked for the difference in correlation of this asset versus other assets in the portfolio. MR. BADER recalled the investment returns were not aligned with much volatility and believes it has a very low correlation. He does not have the precise number at this meeting, but can get the information. MR. BADER noted this asset class is volatile during catastrophic events.

A roll call vote was taken, and the motion passed unanimously.

E. Fidelity Small Cap Fund

MR. BADER reported the Fidelity Institutional Management Small Cap Fund is now open to new institutional investors. The current 12 institutional investors hold a total of \$2.5 billion under management. The target rate of return is an excess of 4% over the Russell 2000 Index, with a tracking error of 4% to 8%. The annualized performance for 10 years was 10.67% versus the index return of 6.55%, which is 4.12% gross of fees and 3.14% net of fees. The managers utilize bottom-up research and valuation on funds while looking for significant growth possibilities. The portfolio contains between 150 to 250 stocks.

MR. BADER stated the Board has given him authority as CIO to make investments of this nature with managers in good standing, such as Fidelity. MR. BADER advised the Board of his intent to make an investment into Fidelity Small Cap Fund, absent any prohibition from the Board during this discussion. He believes it is a good investment. MR. BADER commented the investment opportunity may be closed by the February meeting.

VICE-CHAIR TRIVETTE inquired about the amount to be invested. MR. BADER indicated the delegation allows him to investment up to 1% of fund assets, which is approximately \$200 million. He does not intend to invest the entire allowed amount. MR. BADER explained this investment could be used to fill one or more of three potential investment needs, 1) combining this fund with a portable alpha strategy, 2) using this fund to replace poor performing small cap strategies, or 3) utilizing this fund as a new product in the small cap branded strategy space.

There was no objection to MR. BADER moving forward with the Fidelity Small Cap Fund investment.

RECESS FOR THE DAY

CHAIR SCHUBERT recessed the meeting at 2:39 p.m.

Friday, December 4, 2015

CALL BACK TO ORDER

VICE-CHAIR TRIVETTE reconvened the meeting at 8:59 a.m.

Trustees Hoffbeck, Fisher, Harbo, Erchinger, Brice, Ryan, and Pihl were also present. Chair Schubert arrived after 9:00 a.m.

13. BARROW HANLEY MEWHINNEY & STRAUSS, LLC

MR. BADER noted Barrow Hanley runs two mandates for the ARMB. The Diversified Large Cap Value Fund is comprised of approximately \$320 million out of total assets under management of approximately \$4 billion. The Small Cap Value Concentrated Fund is currently closed and is comprised of approximately \$80 million out of total assets under management of approximately \$2.4 billion. MR. BADER introduced MATT EGENES, Client Portfolio Manager, and JIM MCCLURE, Portfolio Manager for Small Cap Value.

MR. EGENES provided an overview of Barrow Hanley. He reviewed the equity investment team and explained the first, second, and third generations of managers. MARK GIAMBRONE has been the Manager for the Diversified Large Cap Value since the inception of the strategy in 2000, and is assisted by equity analysts MICHAEL NAYFA and TERRY PELZEL. MR. MCCLURE comanages the Small Cap Value Fund with JOHN HARLOE, and they are assisted by equity analysts COLEMAN HUBBARD and MELODIE HUNT, a new addition to the team. MR. EGENES noted the pending retirement of TIM CULLER, who is the large cap value portfolio manager. This has no impact on the ARMB's strategies and there are no other planned retirements. MR. EGENES directed the Board's attention to the decades of investment experience of the portfolio managers. He commented Barrow Hanley has not lost a portfolio manager to a competitor in 36 years. MR. EGENES reviewed a subset of the 280 client partnerships and their years of investment. Barrow Hanley is a uniquely stable firm growing in a controlled fashion.

MR. BADER inquired about the qualities Barrow Hanley considers important in hiring new analysts, such as MS. HUNT. MR. MCCLURE indicated he hired MS. HUNT, and explained Barrow Hanley utilizes a stock selection system that is different from other managers. Barrow Hanley looks for people who fit the criterion of no experience, good education credentials, and a temperament to withstand the necessary difficulties of investing in highly undervalued troubled companies.

MR. EGENES gave an overview of the current market conditions. 2015 has been a volatile period, with most of the indices through September in negative territory. He explained a chart illustrating for large cap and small cap, when returns are robust and above average, a minority of active managers outperform the indexes, and when returns are modest and down, a majority of the managers outperform the index. The Diversified Large Cap Value through the end of November is 2.6% compared to the Russell 1000 Value Index of -1.7%. The portfolio has outperformed the index by about 3.4% annualized over the last 16 years..

MR. EGENES explained the investment process of the Diversified Large Cap as valuation and dividend-centric. The experienced managers are looking for companies that are down for reasons that can be identified and are temporary. The proof statement showed the portfolio with a lower P/E and lower price-to-book relative to the market and a dividend yield premium relative to the market. The long investment horizon of three to five years and a low turnover approach of 25% to 30% contributes to the success of the process. The mergers and acquisitions cycle has been the most active in history and very positive for the portfolio, both for companies being acquired and the companies that acquire.

MR. EGENES noted the portfolio positioning in Diversified Large Cap is an overweight in consumer discretionary, particularly the cruise lines of Royal Caribbean and Norwegian. Capacity is being taken out of the Caribbean, improving pricing, and is being moved to China where there is demand. The middle income consumer in China is doing well and the cruise lines are catering to them. The cruise lines will probably be the first business able to take advantage of the opening of Cuba to tourism when it comes.

MR. EGENES showed the portfolio has been underweight energy for quite some time. The analysis is based on the individual company's merit and modest additions have occurred to current companies, such as BP, ConocoPhillips, and Occidental Petroleum. The current price of energy is used in the earnings model. MR. BRICE requested an opinion regarding oil prices. MR. EGENES believes 2016 will be a year of flat to down trending prices in energy. Out into 2017 and beyond, MR. EGENES believes demands will be greater and supply may be cut, leading to higher energy prices. He noted some companies are still able to make money at \$40 a barrel.

MR. EGENES explained the portfolio is underweight financials, but overweight banks, especially the interest rate sensitive banks. As interest rates rise, which he believes will occur slowly and methodically in December and in June, the assets reprice faster than the deposits. The interest rate sensitive banks can capture the rising net interest margin. Conversely, the portfolio does not own any utilities or REITs, which will be hurt by higher interest rates. The valuation and relative yield on REITs is about half of its historical yield, which is prohibitive to investment in the sector.

MR. EGENES believes the market is in the range of fair value. The bull market is about 6.5 years in duration. Over the next 10 years, returns are expected to be in the low to mid single digits. This strategy adds the most value when returns are less than 10% annually.

MR. MCCLURE expressed his appreciation to the Board for allowing Barrow Hanley to manage funds. He noted the strategy for investment in Large Cap Value and Small Cap Value is the same, but the amount of opportunities is much broader and it changes more frequently. MR. MCCLURE indicated the market today presents constant challenges, domestically and abroad. This volatility produces opportunities. Year-to-date, the Small Cap Value portfolio is positive over the index by about 2.5%.

MR. MCCLURE explained the Small Cap Value portfolio focuses on companies with sustainable free cash flow. The value tends to be located in companies who have relatively low dividend yields, are immature, growing rapidly, and are out of favor. There have been three buyouts in the portfolio of 37 stocks this year. The top 10 holdings have changed dramatically during the last year and stock selection is the primary reason for outperforming the index. MR. MCCLURE discussed the stocks added and eliminated from the portfolio during the year. The average turnover is approximately 20% a year.

MR. MCCLURE reviewed the charts showing the long-term performance relative to the benchmark. He apologized for it being an arithmetic scale, rather than a logarithmic scale, and focused the Board's attention to the sharper upturn at the end of the chart, which also occurred in 2011. MR. MCCLURE reminded the Board this mandate was given in April of 2011, right before the market took an enormous hit. Between the time the account was acquired and the end of the third quarter of 2011, the benchmark was down 24%. What managers did then was what they were doing at the end of the last quarter when the benchmark was down almost 11%. Managers went through the portfolio and sold companies that had held up well in the downturn, and became more concentrated in stocks that had higher potential. This was explained and the Board understood in a very thoughtful way. When the market turn came, in both cases, the portfolio did well. MR. MCCLURE expressed his appreciation for the Board's long-term point of view. He explained in downturns, they try to maximize the advantage and turn adversity into opportunity by becoming more concentrated in the very best ideas.

MR. BADER requested additional information on the managers' sell discipline. MR. MCCLURE informed the portfolio is run with a real time model that ranks each position according to relative return over a forward three-year period, making assumptions about free cash flow, earnings, and valuation levels. The positions with the least relative return at the bottom of the list are automatically replaced by positions that are either new ideas or existing companies that are ranked higher.

14. LAZARD ASSET MANAGEMENT

MR. BADER introduced TONY DOTE, Managing Director, and ROBERT FAILLA, Director, Client Portfolio Manager, of Lazard Asset Management. MR. BADER advised Lazard is one of the ARMB's largest active investment managers with ARMB assets well over a billion dollars. The investment mandates include an emerging markets fund, infrastructure fund, small cap international fund, and an LEI. Under discussion today is Global Equity consisting of \$729 million of ARMB's assets.

MR. DOTE expressed his appreciation to the Board for their trust, confidence, and business placed with Lazard over the years. MR. DOTE indicated Lazard business and asset management has been good in 2015, despite the difficult and volatile markets. Security selection is a bottom-up style, looking for companies that have high returns on their business and are selling at a reasonable price. The banking side has had record profitability the last two years. The Lazard client type is very diverse with 114 clients. Public funds are approximately 25% of the firm's business. Lazard is a highly equity-oriented firm with about

2/3 or the assets in global equity, international, and emerging markets mandates. The fixed income portion of the firm's assets is growing.

MR. DOTE stated there have been no changes to the investment philosophy and process. The combination of consistency of implementation and consistency of people is what leads to the strong and consistent investment performance. MR. DOTE indicated a slight amendment to the structure of the global portfolio late in 2015 allows the portfolio to hold 0% or up to 10% over the benchmark exposure in emerging markets. Today, the portfolio is approximately equal weighted to the benchmark. The Board also allowed the capitalization of the portfolio to be broadened to include international small cap and U.S. small cap companies. Today, the allocation is approximately 10% international and U.S. small cap.

MR. DOTE noted the market year-to-date has been through a tumultuous period. The U.S. market was 3%. The EAFE was 5/10th of 1%. The emerging markets were -13%. MR. DOTE believes the selling momentum in emerging markets has been driven by fear, with the macro issues dominating the market environment. The alpha in the portfolio is driven by the companies owned and the sector allocations are neutral. The market was -7% year-to-date through September, and the portfolio outperformed at -4.2%. The added value was from strong stock selection in Europe, UK, U.S., and Japan, with good performance in the consumer areas, health care, and finance. Performance in technology and telecom has been weak, and emerging markets has underperformed.

MR. DOTE reviewed the asset allocation of the portfolio compared to the index, with a slight overweight in the international markets, a slight underweight in the U.S., and evenly weighted in emerging markets. MR. DOTE noted the last five years have been volatile and difficult, but the results have been consistent. The portfolio outperformed in four out of the last five years.

COMMISSIONER FISHER requested additional comments regarding the long-term view of the emerging markets, including predominant issues and suggested allocation changes. MR. DOTE believes the emerging markets are the least efficient markets of all the equity markets. The non-fundamental macro issues that are dominating include governments, politics, currency, surpluses or deficits, and corruption. Currently, the valuation gap between the emerging and developed markets is at an all-time low. Emerging markets are cyclical like any other equity market. MR. DOTE believes there are still some headwinds in the near-term, especially with significant problems with Brazil, but going forward there is great opportunity and allocation will be increased.

MR. FAILLA added the portfolio is focused on valuation and financial productivity. The emerging markets team is comprised of 80 people in three groups; equity, debt, and currency. The belief is there is a mismatch between perception and reality in the emerging markets landscape. Emerging market equities are correlated with commodities, and as the commodity markets stabilize, so will the emerging markets. MR. FAILLA believes the market has been conditioning for the potential of an increase in interest rates for the last two-and-a-half years.

MR. FAILLA presented the portfolio direction in terms of sector and regional weights versus the benchmark, and illustrated the managers are stock pickers and not thematic investors. MR. FAILLA reviewed recent company additions to the portfolio in consumer staples, and financials, and trimmings in technology, health care, and consumer discretionary. Many companies have reached their price targets or their thesis has changed. There have not been many changes in regional allocation. The positioning in Japan has been increased over the past several years.

MR. BADER requested the evaluation process for Volkswagen. MR. FAILLA noted the portfolio has not owned Volkswagen for quite some time. The return on capital versus its valuation is a big consideration. The situation for Volkswagen is very opaque because of the unknowns concerning the litigation reserves. MR. FAILLA stated Lazard's auto analysts around the world are monitoring the situation and believes a passage of time must occur.

MR. FAILLA informed the overall outlook is lower economic growth globally for developed and emerging markets. There are very few signs of inflation around the globe. The U.S. labor markets are improving and we need to continue to create jobs. The U.S. has the potential of raising the Fed funds rates in the coming weeks. The consumer and financial sectors within the U.S. market have de-levered since the financial crisis and the public sector still has a significant amount of leverage. This could become an issue if the U.S. rates rise more rapidly than expected. Earnings growth in the U.S. is decelerating because of the strong dollar. The U.S. GDP growth is around 2.5%.

MR. FAILLA noted earnings growth in Europe is better than last year. Commodity prices are cheaper and the currency is weaker. There is opportunity to grow margins and earnings in Europe. Japan is also seeing earnings growth. There is a positive change from a structural reform standpoint and companies are more focused on better corporate governance and profits. Japan has been fighting 25 year's deflation. The government has incentives to pay their workers more and have created a stimulative monetary policy to create some inflation.

MR. FAILLA described emerging markets continue to be challenged by the macro environment. The headwinds include the transition from fixed asset growth, particularly in China, to a more domestic consumer-driven economy, weaker commodity prices, and currency issues. Consumer services is growing very rapidly in China and elsewhere in Asia.

VICE-CHAIR TRIVETTE asked if the fear that is driving emerging markets will change in the next two to three years to other factors that might have a bigger impact. MR. DOTE stated from a behavioral point of view, the retail investor is still exhibiting lots of fear and the institutional investor is leading the behavior shift by looking at this as a three to five-year opportunity. There have been very large asset flows out of emerging markets in the past two years, but so far this quarter, there has been a very slight positive flow into emerging markets. Valuations are expecting the slowdown and a lot has been priced in.

CHAIR SCHUBERT recessed the meeting from 10:22 a.m. to 10:34 a.m.

15. QUANTITATIVE ASSET MANAGEMENT

MR. BADER informed the ARMB has been investing with QMA since 2007 in the large cap value portfolio, which is comprised of \$314 million. MR. BADER introduced STEVE COURTNEY, Co-Head of Value Equity, of QMA, who discussed the large cap value portfolio and investment style. MR. COURTNEY expressed his appreciation to the Board for their participation with QMA. MR. COURTNEY noted QMA is a wholly-owned investment subsidiary of Prudential Financial and have been serving investors since 1975. QMA is operated independently in terms of investment decision-making process, staff, and administration. There is currently a total of \$105 billion under management in all strategies and asset allocations. The value equity team manages \$5 billion in assets.

MR. COURTNEY reviewed the members of the value equity team and noted he and MITCH STERN were named as co-heads of the team in March. JOHN LEIB, who had been the head of the group, announced his retirement in March of 2014, and granted a one-year transition period. MR. COURTNEY stated he has been in the industry for 29 years and 26 of those years were at ClearBridge Investments. He joined QMA in 2013. MR. STERN has been with QMA for 17 years and has done significant work with the team as a research developer enhancing the value equity strategy process.

MR. COURTNEY discussed the environment for stocks have been tough. Large cap stocks have outperformed small cap stocks year-to-date. He believes this is due to a growing distaste for risk within the market and a fear of higher interest rates in the U.S. MR. COURTNEY noted the bigger issue in the large cap space is the underperformance in value stocks versus growth stocks. Investors are willing to pay a larger premium for companies with higher rates of growth. The gap is significant and the largest MR. COURTNEY has seen at about 900 basis points.

MR. COURTNEY believes the very attractive portfolio will be realized when the reversion to the mean occurs. The portfolio has trailed the Russell 1000 Value Index year-to-date by 26 basis points, net of fees. The emphasis is on deeper valued stocks. The models perform best among the financial, energy, and health care sectors. Financials are quite attractive now, especially banks and insurers that are beneficiaries of expanded spreads in interest rates. Discretionary stocks appear relatively attractive and are the largest overweight in the portfolio. Energy remains challenged and it is important to analyze the quality of holdings on the balance sheets. Health care and consumer staple stocks are the most expensive and are the largest underweights in the portfolio.

MR. COURTNEY provided an overview of the investment process. The managers are focused on low price-to-earnings companies across the Russell 1000 Index, reviewing the trailing two-year earnings of various data sources. Significant research occurs on individual companies to reflect the underlying operations of the companies. The stocks are ranked on attractiveness of valuation. The stocks are reviewed in terms of relative performance, particularly looking for companies that have underperformed due to the overreaction or the unfair discount by the market. Those attractive stocks undergo an additional portfolio manager review.

MR. COURTNEY explained the sell process ranks companies in the portfolio that are at higher P/Es and have a positive relative performance profile. The stocks are reviewed and when they meet the criteria as unattractive, they become part of the sell list. This is a very disciplined process and is key to the value approach of investing. The diversified portfolio currently holds 144 stocks. MR. COURTNEY noted the top individual contributors to relative performance have been from the health care, energy, utilities, and consumer discretionary sectors. The detractors were in industrials, energy, consumer staples, information technology, and materials sectors.

ACTION ITEMS - NEW BUSINESS

None

OTHER MATTERS TO PROPERLY COME BEFORE THE BOARD

None

PUBLIC/MEMBER COMMENTS

None

INVESTMENT ADVISORY COUNCIL COMMENTS

DR. JENNINGS walked the Board through an example of a base rate problem used in behavioral finance, which is the tendency to get too focused on details rather than the broader math. DR. JENNINGS noted the outperformance over the last decade of 10 basis points is hugely relevant at \$250 million. He suggested any underperformance reported should be calculated from a percentage to an actual dollar amount to understand the difference.

DR. JENNINGS gave an example if the index fund expenses of roughly two basis points on 10% of the portfolio could be saved, this is approximately \$500,000 a year, which could be used for staff to hire people to potentially implement that internally. DR. JENNINGS noted the three managers who presented have been good managers with reasonable fees. Those fees added up to \$5 million in the past year. DR. JENNINGS believes it is important to get the calculators out and show some real dollar consequences.

TRUSTEE COMMENTS

COMMISSIONER HOFFBECK informed the Board there will be discussion during the February meeting regarding pension obligation bonds. The Governor is rolling out his budget and fiscal plan next week, which includes pension obligation bonds.

MR. PIHL highlighted the two takeaways from the meeting were that banks and financials will benefit from rising interest rates, and beer is a consumer staple.

MR. BRICE agreed with DR. JENNINGS' insights regarding the near misses in performance. He suggested further conversation regarding the six to seven-year business cycle used for manager evaluation.

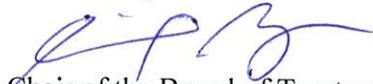
MS. ERCHINGER recommended releasing an information statement regarding the investment earnings assumption in anticipation of the response to the CalPERS change in investment earnings assumption. She thinks this will become a hot topic and it is prudent to get out in front while there is an opportunity to present the information. MS. ERCHINGER believes the portfolio has done really well meeting the targets.

FUTURE AGENDA ITEMS

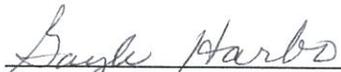
None

ADJOURNMENT

There being no objection and no further business to come before the Board, the meeting was adjourned at 11:04 a.m. on December 4, 2015, on a motion made by MRS. HARBO and seconded by MS. RYAN.


Chair of the Board of Trustees
Alaska Retirement Management Board

ATTEST:


Corporate Secretary